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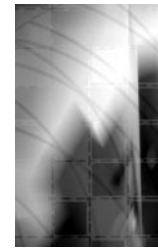

Non-standard employment relations and wages among school leavers in the Netherlands

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ABSTRACT

Non-standard (alternatively, flexible) employment has become common in the Netherlands, and viewed as an important weapon for combating youth unemployment. However, if such jobs are 'bad', non-standard employment becomes a matter of concern. In addition, non-standard employment may hit the least qualified, excluding them from the primary segment of the labour market, where 'good' jobs are found. We first examine whether less-educated school leavers more often end up in a job with a non-standard employment contract than the higher educated. Then, we investigate the effect of having a non-standard employment contract on job advantages in terms of wages. The data come from three large-scale Dutch school leaver surveys as held in 2001. The results show: (a) less-educated school leavers indeed are more likely to have a non-standard contract than more highly educated ones, while (b) those in non-standard employment earn less in their jobs. A substantial part of these differences can be ascribed to the segment of the labour market in which school leavers work.

KEY WORDS

labour market segmentation / the Netherlands / non-standard employment relations / school leavers / wages

Introduction

The crisis in the world economy in the 1970s led to high pressure on post-war welfare states in many western countries. High unemployment rates stimulated the call for more labour market flexibility (Brodsky, 1994; Córdova, 1986; Goudswaard, 2003). As a consequence, the standard employment relationship began to unravel (Rubin, 1995) and various kinds of non-standard or flexible work arrangements (such as part-time work, temporary agency, and contract company employment, short-term employment, contingent work, and independent contracting) emerged (Kalleberg, 2000).

Advocates of labour market flexibility emphasize the advantages for both employers and employees (Belous, 1989). For employers, it has the advantage that the deployment of labour can be adapted more easily to the firm's production needs. In addition, employers are able to 'screen' new workers before offering them a permanent – and usually full-time – paid job (Blank, 1998). The advantage of labour market flexibility for employees is that they have more freedom to choose their own employment conditions.

Others, however, see disadvantages for employees. One of the results of a flexible labour market may be that particular groups of workers are confronted with non-standard employment (Muffels et al., 1999). In addition, the rewards of work for employees with a non-standard employment relation may differ from that of employees with a standard one (Atkinson, 1985; Kalleberg et al., 2000; Steijn, 1999). Differences include job security and career and salary developments of employees. In other words: labour market flexibility constitutes a problem if the job quality for employees with a non-standard employment contract is less favourable than for employees who have a regular contract. Flexibilization may then result in a 'two-tier' labour market, with on the one hand, employees working for a company on the basis of a permanent contract and having good employment conditions and career opportunities, and on the other hand, employees working on the basis of flexible contracts with much less favourable employment conditions and career opportunities (Magnum et al., 1985). This notion is in line with a theory on the functioning of the labour market – that is, labour market segmentation theory – which emphasizes that the labour market cannot be regarded as a single entity, but should be subdivided into a segment with 'good' jobs and a segment with 'bad' jobs (Dekker et al., 2002; Doeringer and Piore, 1971; de Grip, 1985; Lutz and Sengenberger, 1974).

This article investigates the effects of flexibilization for young people who recently entered the Dutch labour market. The emphasis is on labour market entrants, since school leavers without any work experience ('outsiders') are, especially, confronted with labour market flexibility in the competition for available jobs with those who have already gained a position on the labour market ('insiders'). Moreover, the focus is restricted to numerical flexibility in terms of non-standard employment contracts. We first determine to what extent the likelihood of having a non-standard employment contract differs between

school leavers with varying levels of education and – supposing this difference exists – how to interpret the effect of level of education. Then, we examine the wage effects for school leavers who have a non-standard employment contract. We try to answer these two research questions using the labour market segmentation theory. On the basis of this theory, hypotheses are formulated on both the likelihood of having a non-standard employment contract and the association between the type of employment contract of school leavers and their wage level. To test these hypotheses empirically, we use data from three large-scale school leaver surveys held in the Netherlands in 2001 among school leavers from secondary education and graduates from tertiary education.

The Netherlands provides an interesting context for the analysis of labour market flexibility. As a result of the high unemployment rates of the 1980s and early 1990s, a number of active policy measures have been adopted since then to make the Dutch labour market more flexible. The Wassenaar Agreement of 1982 is considered as the basis for these initiatives and regarded as one of the pillars of the 'Dutch Miracle' (Visser and Hemerijck, 1997). As a consequence, flexible employment has increased remarkably in the Netherlands. Table 1 shows that, apart from Spain, the Netherlands had the highest increase in flexible employment in the European Union in the period 1985–1995. This increase is to a large extent as a result of the rise of part-time jobs, which in the Netherlands, however, do not necessarily have the characteristics typical of flexible jobs (Fagan et al., 1995). But even if flexible employment is restricted to temporary employment, the Netherlands holds a position among the top-ranking countries (Delsen, 1995). It remains an issue, however, whether the increased labour market flexibility in the Netherlands has resulted exclusively in winners (Remery et al., 2002), or whether it also has led to marginalization of particular groups of workers on the labour market (Delsen, 2000). The contribution of this article is to gain more insight in this issue by studying the effects of labour market flexibility for individual workers in terms of non-standard employment relations and wages.

Theoretical background

Unequal opportunities

Theories differ about the mechanisms by which educated persons are allocated to positions on the labour market. According to the human capital theory (Becker, 1964), the skills acquired in education represent human capital. Investments in human capital are useful, as long as they lead to higher productivity on the labour market. Employers value labour productivity by offering the best positions to those individuals who have obtained most human capital. The job competition theory (Thurow, 1975) rather stresses the importance of trainability. When selecting employees employers make an estimate of the required training costs of potential workers. Accordingly, they rank potential

Table 1 Development of flexible employment in the European Union, 1985 and 1995: EU 1985 = 100

	1985	*1995*
Belgium	85	93
Germany	87	98
Denmark	126	114
Greece	168	132
Spain	121	174
France	76	107
Ireland	95	116
Italy	92	103
Luxembourg	58	57
Netherlands	106	162
Austria	–	86
Portugal	126	117
United Kingdom	107	119
Finland	88	115
Sweden	126	134
European Union	100	115

Notes: – = unknown. Flexible employment refers to self-employment, part-time employment, and employment on fixed-term contracts. The original percentages have been converted into an index relative to the EU average share of flexible employment in 1985.
Source: de Grip et al. (1997: Table 1).

workers in an imaginary labour queue, with those who require the least investment in additional training in front of the queue. Educational qualifications are used as indicators of trainability. Training costs for less-educated individuals are higher than for more highly educated ones, because the former are less trainable. As a result, less-educated individuals find themselves at the back of the labour queue. A third theory, the conflict theory, claims that education can be interpreted as a status good (Bourdieu, 1973; Collins, 1979). Basic assumption here is that education provides pupils from higher status groups with qualifications. The status aspects of education are an important criterion when employers select employees, and, therefore, those with most educational qualifications are offered the best labour market positions.

Despite the different mechanisms at work, these labour market theories have it in common that more highly educated individuals are supposed to be in a better labour market position than less-educated ones. This better labour market position not only refers to the status of the job (in terms of occupational prestige or income), but also to aspects of job security. For that reason, we expect that the likelihood of having a non-standard employment contract differs between school leavers with varying educational backgrounds. Earlier Dutch research has shown on several occasions that less-educated workers are more likely to have a flexible contract than more highly educated ones (see

among others Muffels et al., 1999; de Beer, 2001). Following these research findings, our first hypothesis is therefore:

Hypothesis 1a: Less-educated school leavers are more likely to have a non-standard employment contract than more highly educated school leavers.

In addition, it can be assumed that the less-stable position of less-educated school leavers especially manifests itself under unfavourable labour market circumstances. According to the human capital theory, in a situation of excess of labour supply wages will fall to recover imbalances between labour demand and supply. Because of that, substitution effects occur: less-educated individuals are replaced by more highly educated ones, since the former have become relatively too expensive. According to the job competition theory, in a labour market characterized by a surplus of labour supply, the job queue will be longer, and the higher educated who no longer have access to the best jobs will try to find a job further down the queue. More highly educated employees will then suddenly find themselves competing with less well-educated employees, who originally had these jobs. This competition generally ends in success for the higher educated. After all, they have superior qualifications. And finally, according to the conflict theory, higher status groups will – as a compensatory strategy – increase educational requirements under unfavourable labour market circumstances to safeguard their own position at the expense of lower status groups. Therefore, as a supplement to our first hypothesis:

Hypothesis 1b: The relative difference in the likelihood of having a non-standard employment contract between less-educated school leavers and more highly educated school leavers is greater under unfavourable labour market circumstances.

Labour market segmentation

The next question, then, is why the likelihood of having a non-standard employment contract differs between school leavers with varying educational backgrounds. An answer to this question can be found in the labour market segmentation theory. According to this theory, the labour market cannot be regarded as a single entity, but as consisting of various labour market segments, each with its own allocation mechanisms (Dekker et al., 2002; Doeringer and Piore, 1971; de Grip, 1985; Lutz and Sengenberger, 1974). This theory is based on the assumption that there is a relation between the allocation mechanisms in the various labour market segments and the required qualifications. It is customary to divide the labour market into two segments, with a primary segment for 'good' jobs and a secondary segment for 'bad' jobs.[1] In the primary segment of the labour market, we find mostly employees with well-paid, permanent jobs and (firm-internal) promotion opportunities. These employees make up the core of permanent workers of a firm, who carry out the key activities. Most have been with the firm for a long time, and have the firm-specific knowledge and skills necessary to carry out these key activities (Atkinson, 1985; Steijn, 1999).

To gain access to the primary segment, one needs occupation-specific or firm-specific knowledge and skills, often translated into an education at minimally the level of upper vocational secondary education. In the secondary segment of the labour market, we find workers in less well-paid temporary jobs, without promotion opportunities. The employees concerned are often external, low-educated workers, employed to adapt the deployment of labour to a (temporary) production increase. This work generally does not require occupation-specific or firm-specific knowledge and skills.

Since a minimum qualification level is required to gain access to the primary segment of the labour market, it can, therefore, be expected that the likelihood of being employed in the secondary segment is greater for less-educated school leavers than more highly educated ones. As non-standard employment is more common in the secondary segment of the labour market than in the primary one, our second hypothesis is:

Hypothesis 2: Less-educated school leavers are more likely to have a non-standard employment contract than more highly educated school leavers, because the former are more often employed in the secondary segment of the labour market.

Non-standard employment and wages

There is hardly any research available in the Netherlands addressing the consequences of non-standard employment for the workers involved (Steijn and Need, 2003). Nevertheless, the (long-term) effects of labour market flexibility for individual workers are an important issue. A main concern is whether non-standard employment constitutes an entrapment outside of, or a stepping stone into, a stable position on the labour market. In the latter case, the (long-term) effects of non-standard employment are less problematic. Most international research, however, supports the hypothesis that workers in a non-standard employment contract are in a disadvantageous position on the labour market compared to those workers with regular work arrangements (Dale and Bamford, 1988; Gallie et al., 1998; Kalleberg et al., 2000; Nollen, 1996). This disadvantageous labour market position is mainly reflected in a lower job quality. As there is a broad consensus on the fact that wages are an important indicator for job quality, our third hypothesis can be formulated as follows:

Hypothesis 3: School leavers with a non-standard employment contract earn less than school leavers with a regular contract.

To explain wage differences between school leavers with a non-standard employment contract and those with a regular one, we once again use the labour market segmentation theory. As indicated, workers with a regular employment contract are usually found in the primary segment of the labour market. Employers are prepared there to invest in employees in order to make them more productive or more widely employable. However, there needs to be a return on investments, and this can often only be achieved over a longer

period of time (Psacharopoulos, 1987). Employers, therefore, try to bind such employees to the firm. A firm loses some of its capital as soon as an employee with firm-specific training resigns or is laid-off. Firms can bind employees by offering them better employment conditions than they could get elsewhere. This is possible because employees who have firm-specific knowledge and skills are more productive in their own firm than in other (de Grip, 1985).

In the secondary segment of the labour market employers, as said before, mainly make use of less-educated workers to compensate for fluctuations in the work to be done. These workers can be hired through job agencies (temporary-help agency employment) or can be called up (on-call employment). The investment made by employers in employees with these non-standard work arrangements is usually minimal. The work generally consists of support and/or temporary activities that require little training. This means that there is hardly any loss of capital when workers with a non-standard employment contract leave the firm. Employers, therefore, have little reason to bind these workers to their firm. As soon as the productivity of the firm declines, temporary workers become superfluous and will be laid-off first. The employment conditions offered to employees with non-standard work arrangements are therefore less favourable (Emerson, 1988; Moberly, 1987). The above assumes that differences in job quality in general and, more specific, differences in wages between workers with a non-standard employment contract and those with a regular one can be attributed (partly) to the segment of the labour market, which they have entered. Hence, our fourth and final hypothesis is:

Hypothesis 4: School leavers with a non-standard employment contract earn less than school leavers with a regular contract, because the former are often less educated and therefore more often working in the secondary segment of the labour market.

Research design

Data

To test these hypotheses, we use data from three large-scale, nationally representative school leaver surveys as held in the Netherlands in 2001 by the Research Centre for Education and the Labour Market of Maastricht University. These comparable surveys concern RUBS 2001 (*Registratie van Uitstroom en Bestemming van Schoolverlaters* – Registration of Outflow and Destination of School leavers), HBO-Monitor 2001, and WO-Monitor 2001. The RUBS survey refers to school leavers of general secondary education (lower general secondary education (MAVO), upper general secondary education (HAVO), and pre-university education (VWO)) and vocational secondary education (lower vocational secondary education (VBO), and upper vocational secondary education (MBO)). The HBO-Monitor and WO-Monitor contain, respectively graduates of vocational college (HBO) and university (WO). These

postal surveys, for the purpose of which tens of thousands of school leavers and graduates are approached every year, mainly aim at mapping the labour market entry of school leavers. The time of interviewing is about a year and a half after finishing education. This means that the figures presented here are based on school leavers and graduates of, respectively, the school and academic year 1999/2000. The information collected refers to several aspects of labour market entry. Data are, among other things, gathered about employment opportunities (unemployment, job-search duration), the nature of the employment contract (flexible, part-time), job characteristics (wage, level of occupation, required qualifications), and characteristics of employers (sector, company size). In addition to this, the curriculum of the education left is evaluated. The respondents are asked about their experience with the linkage between their finished education and the job found. It concerns the importance of and the attention to all kinds of competences, knowledge, and skills during the education received.[2]

For the purpose of the current analysis, we selected qualified school leavers who left initial education on one of the above-mentioned levels and subsequently entered the labour market.[3] After list-wise deletion of respondents for whom information was missing on any of the variables used, an analytic sample size of 19,763 respondents remained.

Variables

The type of employment contract of school leavers is established by distinguishing six categories: (1) paid employment,[4] (2) temporary-help agency employment, (3) on-call employment, (4) subsidized labour,[5] (5) family work, and (6) self-employment or independent contracting. School leavers in categories (2) to (6) are regarded as workers with a non-standard employment contract.

The earnings of school leavers are based on the natural logarithm of the gross hourly wages. This hourly wage relates to the job in which the greatest number of hours is made, including any bonuses for shift work, tips, commission, and so on, but excluding any wages from overtime, holiday allowance, extra month's bonus, social benefits, and the like.

The level of education attained by school leavers is measured in four categories: lower secondary education (VBO/MAVO), upper secondary education (MBO/HAVO/VWO), vocational college (HBO), and university (WO).

The division into a primary and a secondary labour market segment is based on three criteria that correspond to important demarcation criteria formulated in the labour market segmentation theory (see Dekker et al., 2002): (1) craft component: close relationship between initial vocational education and occupation, (2) job level, and (3) company size. We demarcate the primary segment first of all by the close relationship between initial vocational education and occupation. Vocational qualifications serve here as means to acquire occupational-specific skills. To measure the relationship between initial voca-

tional education and occupation, we computed an educational dispersion index with respect to the educational background of workers in a particular occupation (see Dekker et al., 2002: 114 for the calculation of this index). This dispersion index shows the educational specificity in a particular occupation, and takes the value of 1 if the occupation concerned is only performed by workers with one particular educational background. The dispersion index is greater if the variation of types of education in an occupation is greater. In the current analysis, we use the index that represents the dispersion of types of education per occupational group across the years 1999 and 2000, as based on national Labour Force Survey data from Statistics Netherlands (ROA, 2001). Second, we determine the primary segment by separating high-level skilled jobs from low-level unskilled jobs. The job level was determined using the standard classification of occupations of Statistics Netherlands (CBS, 1993). This occupational classification distinguishes five levels: elementary occupations, lower-level occupations, medium-level occupations, higher-level occupations, and university-level occupations. Third, company size is used to specify the firm-internal component of the primary segment. According to Doeringer and Piore (1971), a company needs a minimum size to develop rules and procedures for job allocation. Furthermore, only large firms are in a position to offer internal promotions. In the analysis, we distinguish between small companies (1 to 9 employees), medium-sized companies (10 to 99 employees), and large companies (more than 100 employees).

The labour market circumstances under which school leavers enter the labour market are based on a measure indicating the labour market perspective of particular types of education for newcomers on the labour market, calculated on the basis of the ratio between labour supply and demand. The labour demand consists of the expansion demand and the replacement demand for each type of education. The labour supply consists of the inflow of school leavers and the number of short-term unemployed for each type of education. If the supply exceeds the demand, the ratio has a value of more than 1, and the labour market perspective of this type of education is classified as bad. In this article, we use the labour market perspective of various types of education as calculated on the basis of national data sources for the period 1997–2002 (see ROA, 1997 for more details). Each respondent has a score on this variable, depending on the particular type of education he/she has attended.

Lastly, we take into account the school leavers' age, sex, ethnicity, and field of education attended. The age of school leavers is measured in years. Gender differences relate to the distinction between men and women. Ethnicity is determined by distinguishing between native and immigrant school leavers. An immigrant is either someone who was born abroad, or of whom at least one of the parents was born abroad, or someone of whom both parents were born abroad. With respect to field of education, we distinguish the following categories: general, agriculture, education, economics, engineering, health care, behaviour/society, art/language/culture, law/public order, and natural science.

Table 2 Distribution of analysed variables by type of employment contract: percentages

	Paid employment (n = 18,348)	*Temporary–help agency employment (n = 800)*	*On-call employment (n = 224)*	*Subsidized labour (n = 13)*	*Family work (n = 56)*	*Self-employment/ independent contracting (n = 322)*
Log gross hourly wages[a]	2.4 (0.3)	2.3 (0.3)	2.2 (0.4)	2.0 (0.4)	2.0 (0.5)	2.4 (0.6)
Level of education						
Lower secondary	1.5	3.6	3.1	x	14.3	0.6
Upper secondary	18.4	21.0	33.0	46.2	57.1	12.4
Vocational college	59.3	57.1	63.8	53.8	28.6	68.3
University	20.8	18.3	x	x	x	18.6
Sex						
Male	42.5	38.3	21.4	46.2	62.5	56.8
Female	57.5	61.8	78.6	53.8	37.5	43.2
Ethnicity						
Native	92.7	88.5	92.9	76.9	87.5	93.8
Immigrant	7.3	11.5	7.1	23.1	12.5	6.2
Age[a]	26.1 (5.7)	24.5 (3.6)	24.0 (4.8)	27.2 (9.6)	22.2 (3.2)	27.7 (6.0)
Field of education						
General	0.6	1.6	2.2	x	1.8	0.3
Agriculture	5.5	7.8	2.2	15.4	21.4	9.0
Education	9.5	3.5	11.2	7.7	x	3.4
Economics	25.2	28.1	10.3	15.4	37.5	18.6
Engineering	19.5	22.4	7.1	7.7	30.4	14.9
Health care	14.0	8.3	22.3	15.4	7.1	10.6
Behaviour/society	17.5	18.5	42.0	30.8	1.8	7.5
Art/language/culture	3.4	5.4	2.7	7.7	x	34.5
Law/public order	3.2	2.8	x	x	x	0.3
Natural science	1.7	1.8	x	x	x	0.9
Educational dispersion of occupation[a]	10.2 (7.3)	11.4 (6.4)	8.3 (4.3)	9.6 (6.7)	11.0 (5.1)	9.3 (6.4)
Job level[a]	3.7 (0.8)	3.3 (0.8)	3.1 (0.8)	3.2 (0.9)	2.8 (0.8)	3.8 (0.7)
Company size						
Small company	8.1	5.6	12.5	7.7	50.0	73.0
Medium-sized company	27.5	22.9	30.4	69.2	44.6	15.8
Large company	64.4	71.5	57.1	23.1	5.4	11.2
Labour market perspective[a]	0.9 (0.1)	1.0 (0.1)	1.0 (0.1)	1.0 (0.1)	1.0 (0.1)	0.9 (0.1)

Notes: [a] = mean (standard deviation) instead of percentage
x = not observed
Source: school-leaver surveys RUBS (2001), HBO-Monitor (2001), and WO-Monitor (2001)

Table 2 presents a statistical description of the variables that are included in the empirical analysis, broken down by type of employment contract.

Analysis

To analyse the type of employment contract of school leavers, we applied multinomial logit analysis to the data. This analysis shows in a multivariate way the effects of different independent variables on the odds of having a particular non-standard employment contract relative to the odds of having a regular contract. Three models were estimated. The first model shows the effect of the level of education attained by school leavers, controlled for gender, ethnicity, age, and field of education. In Model 2, variables relating to the demarcation of the primary and secondary labour market segment were added: educational dispersion of occupation, job level, and company size. Model 3 investigates to what extent labour market circumstances affect the likelihood of having a non-standard employment contract. In this model, we added the labour market perspective of the type of education that a school leaver has attended and the statistical interaction term between this variable and the level of education attained by that school leaver.[6] Tables 3–5 show the results of this multinomial logit analysis.

Linear regression analysis was used to analyse the natural logarithm of the gross hourly wages earned by school leavers.[7] Four models were estimated. Model 1 shows the bivariate effects of the type of employment contract of school leavers on their gross hourly wages. In Model 2, we controlled for level of education, gender, ethnicity, age, and field of education. In Model 3, we added the labour market segmentation characteristics (educational dispersion of occupation, job level, and company size). Lastly, in Model 4, we included the labour market perspective of the type of education that a school leaver has attended and the interaction between this variable and the educational level attained. Table 6 presents the results of this analysis.

Results

Differences in type of employment contract

Model 1 (Table 3) first of all shows that the level of education attained by school leavers affects the likelihood of having a non-standard employment contract. School leavers from upper secondary education and graduates from vocational college or university are less often found in temporary-help agency employment, on-call employment, subsidized labour, family work or self-employment/independent contracting than school leavers from lower secondary education. For graduates from vocational college, for instance, the odds of being in temporary-help agency employment as opposed to paid employment is 0.492 ($= e^{-0.709}$) times smaller than the corresponding odds for school leavers from lower secondary education. These findings confirm that less-educated school leavers are more likely to be employed in a non-standard employment contract than more highly educated school leavers (*Hypothesis 1a*). In addition, gender has an effect on the type of employment contract of school leavers. The

Table 3 Results of multinomial logit analysis of type of employment contract: logit effects

	Model 1				
	Temporary-help agency employment[a]	*On-call employment*[a]	*Subsidized labour*[a]	*Family work*[a]	*Self-employment/ independent contracting*[a]
Intercept	–1.210**	–1.369**	–1.473**	–1.448**	–1.465**
Level of education					
Lower secondary	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Upper secondary	–0.386**	–0.356**	–0.366**	–0.383**	–0.357**
Vocational college	–0.709**	–0.715**	–0.723**	–0.750**	–0.694**
University	–0.525**	–0.535**	–0.507**	–0.534**	–0.511**
Sex					
Female	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Male	0.074*	0.097**	0.107**	0.109**	0.128**
Ethnicity					
Native	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Immigrant	0.535**	0.530**	0.549**	0.547**	0.533**
Age	0.036**	0.038**	0.041**	0.041**	0.041**
Field of education					
General	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Agriculture	–0.066	–0.050	–0.022	–0.051	–0.014
Education	–0.627**	–0.530**	–0.546**	–0.536**	–0.566**
Economics	–0.404*	–0.388*	–0.370*	–0.356*	–0.374*
Engineering	–0.332	–0.322	–0.305	–0.293	–0.315
Health care	–0.858**	–0.774**	–0.814**	–0.804**	–0.795**
Behaviour/society	–0.621**	–0.547**	–0.606**	–0.598**	–0.611**
Art/language/culture	0.048	0.090	0.091	0.100	0.260
Law/public order	–0.846**	–0.839**	–0.851**	–0.840**	–0.848**
Natural science	–0.305	–0.262	–0.267	–0.257	–0.257
Pseudo R-square	0.036				
Model Chi-square	1,572**				
Degrees of freedom	75				
N	19,763				

Notes: * = $p < .05$; ** = $p < .01$

[a] relative to paid employment

Source: school-leaver surveys RUBS (2001), HBO-Monitor (2001), and WO-Monitor (2001).

results show that males are more likely to work in a non-standard employment contract than females.[8] With respect to on-call employment, for example, the implied odds ratio is 1.102 (= $e^{0.097}$). Furthermore, the effect of ethnicity indicates that immigrant school leavers more often have a non-standard employment contract than native Dutch ones. The age of school leavers also affects the likelihood of having a non-standard employment relation. Older school leavers

are more often employed in a non-standard contract than younger ones. Lastly, the field of education taken by school leavers matters. In any significant case, vocational training protects against non-standard employment.

In Model 2 (Table 4), variables have been added relating to the demarcation of the primary and secondary segment of the labour market: educational dispersion of occupation, job level, and company size. It is striking that after taking these labour market segmentation characteristics into account, the effects of the level of education attained by school leavers on the likelihood of having a non-standard employment contract decrease considerably in comparison with Model 1. This finding implies that the differences found in Model 1 can be attributed in large part to the segment of the labour market in which school leavers end up. This result largely confirms *Hypothesis 2*. In other words: less-educated school leavers are more likely to be employed in a non-standard employment contract than more highly educated ones, because the former have a greater likelihood of working in the secondary segment of the labour market.

Furthermore, Model 2 shows that the educational dispersion of the occupation, job level, and company size affect the likelihood of having a non-standard employment contract. First, the likelihood of having a non-standard employment contract is larger for school leavers with an occupation that is performed by individuals from varying educational backgrounds than for school leavers with an occupation that is held exclusively by individuals from one or a small number of types of education. Second, school leavers with a low-level job have more often a non-standard employment contract those with a high-level job. Third, it appears that school leavers who work in a small company are more likely to have a job with a non-standard employment contract than school leavers who work in medium-sized or large companies.

In Model 3 (Table 5) the labour market perspective of the type of education that a school leaver has attended and the statistical interaction term between this variable and the level of education attained by school leavers are included. The positive sign of the labour market perspective effect shows that school leavers who attended a type of education with an unfavourable labour market perspective are more likely to end up in a non-standard employment contract than those who followed a type of education with a good perspective. The negative interaction effect indicates that an unfavourable labour market perspective for the type of education attended affects less-educated school leavers more severely than more highly educated ones. This result confirms *Hypothesis 1b*. When labour market circumstances are unfavourable, then the likelihood of having a job with a non-standard employment contract is greater, in particular for less-educated school leavers.

Do school leavers with a non-standard employment contract earn less?

In Table 6, the impact of non-standard employment contracts on wages has been analysed. Model 1 shows that school leavers who work in paid

Table 4 Results of multinomial logit analysis of type of employment contract: logit effects

	Model 2				
	Temporary-help agency employment[a]	*On-call employment*[a]	*Subsidized labour*[a]	*Family work*[a]	*Self-employment/ independent contracting*[a]
Intercept	–0.512**	–0.724**	–0.853**	–0.812**	–0.748**
Level of education					
Lower secondary	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Upper secondary	–0.260*	–0.243*	–0.258*	–0.274*	–0.253*
Vocational college	–0.271*	–0.327**	–0.351**	–0.373**	–0.328**
University	0.186	0.100	0.108	0.087	0.090
Sex					
Female	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Male	0.089**	0.111**	0.120**	0.122**	0.141**
Ethnicity					
Native	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Immigrant	0.555**	0.550**	0.569**	0.568**	0.556**
Age	0.041**	0.043**	0.045**	0.045**	0.046**
Field of education					
General	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Agriculture	–0.090	–0.077	–0.049	–0.033	–0.047
Education	–0.477**	–0.399*	–0.412*	–0.403*	–0.440*
Economics	–0.416*	–0.402*	–0.386*	–0.371*	–0.378*
Engineering	–0.260	–0.259	–0.242	–0.229	–0.251
Health care	–0.716**	–0.643**	–0.679**	–0.669**	–0.670**
Behaviour/society	–0.575**	–0.503**	–0.561**	–0.553**	–0.560**
Art/language/culture	0.027	–0.007	–0.010	–0.015	0.149
Law/public order	–0.706**	–0.715**	–0.727**	–0.716**	–0.735**
Natural science	–0.196	–0.165	–0.170	–0.159	–0.163
Educational dispersion of occupation	0.015**	0.014**	0.015**	0.015**	0.014**
Job level	–0.329**	–0.285**	–0.275**	–0.277**	–0.257**
Company size					
Small company	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Medium-sized company	–0.213**	–0.241**	–0.241**	–0.258**	–0.413**
Large company	–0.311**	–0.375**	–0.385**	–0.406**	–0.567**
Pseudo R-square	0.048				
Model Chi-square	2,137**				
Degrees of freedom	95				
N	19,763				

Notes: * = $p < .05$; ** = $p < .01$

[a] relative to paid employment

Source: school-leaver surveys RUBS (2001), HBO-Monitor (2001), and WO-Monitor (2001).

Table 5 Results of multinomial logit analysis of type of employment contract: logit effects

	Model 3				
	Temporary-help agency employment[a]	*On-call employment*[a]	*Subsidized labour*[a]	*Family work*[a]	*Self-employment/ independent contracting*[a]
Intercept	–2.429**	–2.970**	–2.992**	–2.985**	–2.982**
Level of education					
Lower secondary	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Upper secondary	0.524	0.727*	0.636*	0.632*	0.753*
Vocational college	1.184*	1.557**	1.310*	1.309*	1.547**
University	2.295**	2.828**	2.515**	2.525**	2.805**
Sex					
Female	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Male	0.093**	0.114**	0.124**	0.126**	0.144**
Ethnicity					
Native	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Immigrant	0.552**	0.546**	0.565**	0.564**	0.553**
Age	0.040**	0.042**	0.045**	0.045**	0.045**
Field of education					
General	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Agriculture	–0.071	–0.055	–0.028	–0.012	–0.026
Education	–0.432*	–0.364	–0.367	–0.356	–0.406*
Economics	–0.411*	–0.402*	–0.383*	–0.368*	–0.380*
Engineering	–0.225	–0.231	–0.207	–0.194	–0.225
Health care	–0.684**	–0.613**	–0.645**	–0.635**	–0.642**
Behaviour/society	–0.597**	–0.520**	–0.585**	–0.578**	–0.577**
Art/language/culture	–0.013	0.031	0.027	0.031	0.173
Law/public order	–0.695**	–0.702**	–0.715**	–0.704**	–0.722**
Natural science	–0.179	–0.134	–0.149	–0.139	–0.132
Educational dispersion of occupation	0.014**	0.014**	0.015**	0.015**	0.014**
Job level	–0.333**	–0.289**	–0.280**	–0.282**	–0.261**
Company size					
Small company	ref. cat.	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Medium-sized company	–0.211**	–0.238**	–0.238**	–0.255**	–0.410**
Large company	–0.309**	–0.372**	–0.382**	–0.403**	–0.564**
Labour market perspective	1.874**	2.197**	2.091**	2.126**	2.185**
Level of education * labour market perspective	–0.689**	–0.903**	–0.789**	–0.798**	–0.898**
Pseudo R-square	0.049				
Model Chi-square	2,174**				
Degrees of freedom	105				
N	19,763				

Notes: * = $p < .05$; ** = $p < .01$

[a] relative to paid employment

Source: school-leaver surveys RUBS (2001), HBO-Monitor (2001), and WO-Monitor (2001).

employment earn most. For school leavers who are employed as temporary-help agency worker or on-call worker, the gross hourly wages amount to 14 percent ($1 - e^{-0.153}$) and 19 percent ($1 - e^{-0.201}$) less, respectively, than for school leavers who work in paid employment. For school leavers who have subsidized jobs and school leavers who work in their family's company, the gross hourly wages are 37 and 36 percent lower, respectively. The gross hourly wages of school leavers, who work as self-employed or independent workers, do not differ significantly from those of school leavers who work in paid employment. In sum, these findings support *Hypothesis 3*.

Model 2 demonstrates that a large part of the variation in gross hourly wages between school leavers who work in paid employment and school leavers who have a non-standard employment contract, can be ascribed to individual differences with respect to level of education, age, gender, ethnicity, and field of education. After all, the wage differences have decreased considerably in Model 2. The only difference in gross hourly wages that remains large is the one with school leavers in subsidized labour. However, the wage difference here is institutionally determined, and cannot be attributed to differences in individual characteristics. In addition, Model 2 displays a strong positive effect of the level of education attained by school leavers on their wages. Recent graduates from university, for instance, earn more than twice as much than school leavers from lower secondary education ($e^{0.755} = 2.128$). Furthermore, the results show significant effects of gender, age, and field of education. Older, female and vocationally educated school leavers have higher wages than younger, male and generally educated ones.

Adding the labour market segmentation characteristics in Model 3 causes another substantial reduction in the differences in gross hourly wages between school leavers who work in paid employment and school leavers in a job with a non-standard employment contract. Nevertheless, the differences with school leavers who work in paid employment remain significant in this model. Moreover, the gross hourly wages for self-employed or independent workers are significantly higher than for school leavers who work in paid employment. Model 3 furthermore shows that the gross hourly wages of school leavers are higher for those who work in an occupation that is performed by individuals with varying educational backgrounds. Also, school leavers with a high-level job earn significantly more than those with a low-level one. Lastly, school leavers, who work in medium-sized or large companies, have higher gross hourly wages than school leavers who work for small companies.

All in all, the results in Models 2 and 3 confirm to a large extent the hypothesis that the wage differences between school leavers with a regular employment contract and school leavers with a non-standard employment contract can be attributed to the level of education attained by school leavers and, related to that, the segment of the labour market that they have entered (*Hypothesis 4*).

Model 4 shows that the labour market perspective of the type of education that a school leaver has attended negatively affects the gross hourly wages. This

Table 6 Results of linear regression analysis of log gross hourly wages: unstandardized regression coefficients

	Model 1	*Model 2*	*Model 3*	*Model 4*
Intercept	2.420**	1.141**	0.860**	1.154**
Type of employment contract				
Paid employment	ref. cat.	ref. cat.	ref. cat.	ref. cat.
Temporary-help agency employment	–0.153**	–0.082**	–0.056**	–0.057**
On-call employment	–0.201**	–0.078**	–0.048**	–0.047**
Subsidized labour	–0.459**	–0.382**	–0.359**	–0.359**
Family work	–0.454**	–0.161**	–0.103**	–0.100**
Self-employment/independent contracting	–0.012	–0.020	0.032*	0.033*
Level of education				
Lower secondary		ref. cat	ref. cat	ref. cat.
Upper secondary		0.368**	0.326**	0.189**
Vocational college		0.623**	0.462**	0.207**
University		0.755**	0.525**	0.155
Sex				
Female		ref. cat.	ref. cat.	ref. cat.
Male		0.063**	0.056**	0.056**
Ethnicity				
Native		ref. cat.	ref. cat.	ref. cat.
Immigrant		0.004	0.003	0.003
Age		0.021**	0.020**	0.020**
Field of education				
General		ref. cat.	ref. cat.	ref. cat.
Agriculture		–0.016	–0.000	–0.003
Education		0.138**	0.135**	0.131**
Economics		0.118**	0.101**	0.101**
Engineering		0.110**	0.097**	0.094**
Health care		0.146**	0.130**	0.126**
Behaviour/society		0.118**	0.111**	0.113**
Art/language/culture		–0.038	–0.001	–0.004
Law/public order		0.070*	0.041	0.037
Natural science		–0.033	–0.050	–0.055*
Educational dispersion of occupation			0.001**	0.001**
Job level			0.099**	0.099**
Company size				
Small company			ref. cat	ref. cat.
Medium-sized company			0.067**	0.067**
Large company			0.103**	0.103**
Labour market perspective				–0.289**
Level of education * labour market perspective				0.123**
Adjusted R-square	0.018	0.466	0.496	0.496
F-value	75**	862**	811**	750**
Degrees of freedom	5	20	24	26
N	19,763	19,763	19,763	19,763

Notes: * = $p < .05$; ** = $p < .01$
Source: school-leaver surveys RUBS (2001), HBO-Monitor (2001), and WO-Monitor (2001).

means that school leavers who followed a type of education for which the labour market perspective is unfavourable earn less than those who followed a type of education with a good labour market perspective. Moreover, unfavourable labour market conditions affect in particular the wages of the less-educated, as the interaction term between the labour market perspective of the type of education that a school leaver has attended and the level of education attained by this school leaver indicates.

Conclusions and discussion

Labour market flexibility was regarded as an important tool in the fight against unemployment in the Netherlands in the 1980s and early 1990s. Since then, the unemployment level has decreased considerably in the Netherlands, whereas the number of workers with non-standard or flexible work has increased. The question is what the effects of a flexible labour market are for school leavers. In particular, they are vulnerable to labour market flexibility, because of their position of 'outsiders', trying to enter the labour market for the first time. One of the consequences may be that particular (groups of) school leavers are confronted with non-standard employment. In addition, the quality of work for school leavers with a non-standard employment relation may differ from that of school leavers with a standard one. In this article, we have investigated the effects of labour market flexibility for young people who recently entered the Dutch labour market. We first determined whether less-educated school leavers end up in a non-standard employment contract more often than higher-educated school leavers – and supposing that this is the case – how to interpret this difference. Then, we examined the wage effects for school leavers who have a non-standard employment contract.

In the empirical analysis we first found that less-educated school leavers are more likely to have a non-standard employment contract than more highly educated ones. We also observed that the differences found can be attributed largely to the segment of the labour market in which school leavers work. The less educated are more likely to enter the secondary segment of the labour market than the more highly educated, where non-standard employment contracts are more common than in the primary segment. Moreover, it appeared that when labour market circumstances are unfavourable, the likelihood of having a job with a non-standard employment contract is greater, in particular for less-educated school leavers.

The wage analysis revealed that school leavers who work in paid employment earn more than school leavers who have a non-standard employment contract. In particular, differences in the level of education attained by school leavers play an important role here. In addition, the wage differences found can also be ascribed to the segment of the labour market that school leavers enter. Furthermore, unfavourable circumstances on the labour market negatively affect the wages of school leavers, especially these of the least qualified.

What are the effects of flexibilization for newcomers on the labour market in the Netherlands? Our results seem to indicate that labour market flexibility has led to new gaps between less-educated and more highly educated school leavers. In the 1980s and early 1990s, it was mainly the least-qualified school leavers who were hit by unemployment, but in more recent times they do at least find work, although it is often based on a non-standard employment contract, where wages are less. Moreover, the results found show that unfavourable labour market circumstances intensify this 'two-tier' labour market. The relative difference in the likelihood of having a non-standard employment contract and the relative difference in wage level between less-educated school leavers and more highly educated ones are greater when labour market conditions are unfavourable. Overall, these findings suggest that in the Netherlands – despite the recent introduction of legal rules and collective agreements between unions and employers' organizations to balance and reconcile both flexibilization and security in the labour market ('flexicurity' strategies (Wilthagen, 1998)) – the increased labour market flexibility has had detrimental consequences, especially for less-educated labour market entrants. Their position may become even more disadvantageous in the near future, as the unemployment level in the Netherlands has started to increase again recently. Therefore, continuous attention is required by policy makers regarding these negative developments.

With respect to the perspectives of (less-educated) school leavers in the longer term, we must be careful when it comes to drawing conclusions. The findings of this article relate to a snapshot – taken approximately one-and-a-half year after leaving school – and there is a chance that school leavers who have a non-standard employment contract find employment with a regular contract at a later stage in their career. Earlier research has shown that in the Netherlands the chances of moving from a temporary job to a permanent one are quite good. Approximately one out of every two workers with a temporary contract finds a permanent job within three to four years (Muffels et al., 1999). Steijn and Need (2003), on the other hand, have found that for the Netherlands, being in a temporary job has a negative effect on later occupational status attainment. Moreover, these authors conclude that the permanent negative effects of labour market flexibility are stronger for young people. In addition, research by Kurz and Steinhage (2001) among school leavers in Germany has shown that for school leavers who start in a job with a fixed-term contract, the future is less certain than for those with a permanent contract or in self-employment. Further research, therefore, should investigate to what extent in the Netherlands the career prospects for school leavers who start in a non-standard employment contract are less favourable. Using panel data, in which young people can be followed for a longer period, it may then be definitively possible to find out 'whether increased labour market flexibility leads to a reinforcement of the existing segmentation of the labour market or to a dismantling of barriers in the labour market' (Giesecke and Gross, 2003: 161).

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Notes

1 Instead of dividing the labour market into a primary and a secondary segment, a number of studies prefer a division into three segments, in which the primary segment is split into a (firm-)internal labour market and an occupation-specific labour market (see Doeringer and Piore, 1971; Lutz and Sengenberger, 1974).

2 Schools participate on a voluntary basis in these school-leaver surveys. If the sample does not cover all types of education available in the Dutch system of secondary and tertiary education within regions, an additional sample of schools is drawn to reach this coverage. In 2001, however, an additional sample of schools was not needed. Response rates varied significantly between levels of education: from 35 percent for VBO to 60 percent for VWO. However, a telephone survey of 1900 non-respondents does not show selective non-response with respect to a number of labour force outcomes of school leavers. To obtain nationally representative results, the data set is weighted on the basis of population figures with respect to type of education, region, and gender. For a more detailed description of the methodology used in the school-leaver surveys, we refer to Huijgen (2002).

3 In the Netherlands, both school-based and apprenticeship-type vocational education belong to initial education. So, individuals who are on training contracts in work at the moment of the survey are not analysed. However, leavers from these programmes are included in the analysis. They constitute seven percent of the school leavers in the analysis.

4 The majority of school leavers in paid employment have a permanent contract (or the prospect of one). Only six percent have a temporary contract without the prospect of a permanent one.

5 Subsidized labour refers to WIW jobs. These jobs are based on the WIW scheme (*Wet Inschakeling Werkzoekenden* – Deployment of Jobseekers Act). In this case, workers are employed by the local municipality, for a maximum of two years (with a possibility of extension), and subsequently placed at an employer.

6 Level of education is treated here as an interval variable, ranging from the value of 0 for lower secondary education to the value of three for university education.

7 Since a log transformation has been used, the coefficients can be interpreted as changes in terms of percentages of wages because of a unit change in the independent variable.

8 The bivariate effect of sex shows that women are more often in temporary-help agency employment or on-call employment than men. This supports established research findings on gender differences regarding flexible employment. However, as soon as the impact of level of education, ethnicity, age, and field of education are taken into account, the sign of this effect reverses. So, given differences between men and women in their level of education achieved, ethnic background, age, and field of education attended, men are more likely to be in temporary-help agency employment or on-call employment than women.

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